

A NEW MARINE CHIRONOMID FROM SOUTH AUSTRALIA.

By H. WOMERSLEY, F.R.E.S., A.L.S., Entomologist, South Australian Museum.

[Read June 10, 1937.]

In 1926 Dr. F. W. Edwards (Proc. Zool. Soc., London, vol. ii, p. 796) described the extremely interesting genus of midges *Pontomyia* for *P. natans* sp. n., from material collected by Dr. Buxton along the coast of Samoa. Recently a second species of the same genus has been found inhabiting the coast of Reevesby Island, one of the Sir Joseph Banks Group in Spencer Gulf, South Australia. The specimens were collected by Mr. B. C. Cotton, of the South Australian Museum, while with the Melbourne University McCoy Expedition under the leadership of Prof. F. Wood-Jones in December, 1936.

The new species, which is named in honour of the discoverer, differs in but small characters from the genotype, so that in the following description it is only necessary to direct attention to these. Male specimens only were obtained.

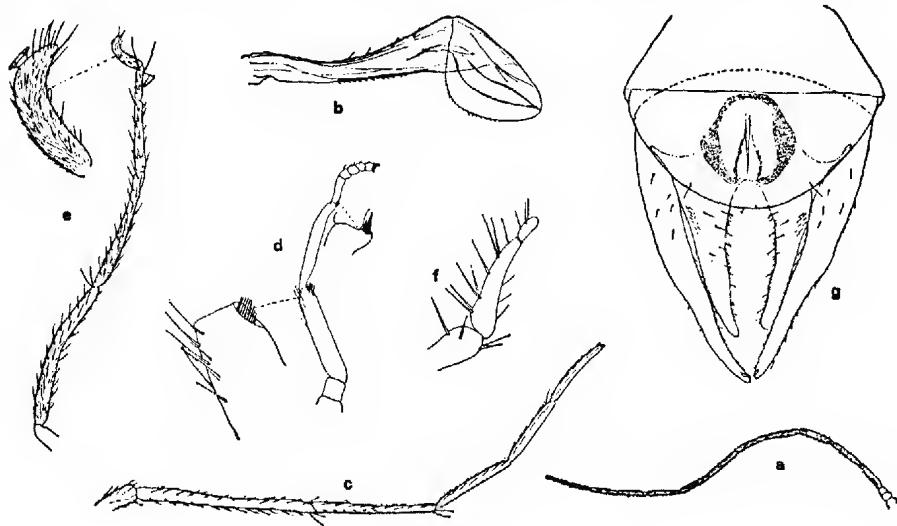


Fig. 1, a-g.

***Pontomyia cottoni*, sp. n.**

(a) antenna, (b) wing, (c) leg I, (d) leg II, (e) leg III,
(f) maxillary palp, (g) male hypopygium.

***Pontomyia cottoni*, sp. n.**

Description of Male.—Differs from the genotype as follows: the eyes are not bare but distinctly pubescent; the tarsi of third legs lack even rudiments of claws, while the ventral tubercle of same is large and distinctly sucker-like; the seventh abdominal segment does not appear to be asymmetrical and lacks the prolongation figured by Edwards; the abdominal segments have the following dorsal setae on each side, I-III one, IV-V three, VI two, VII one, VIII four. The colour is as given for *P. natans*, except that the apical abdominal segments are somewhat darkened. The wings show the same peculiar twist as in *P. natans*.

The genus *Pontomyia* is defined by Edwards thus:—Male: Antennae 15-segmented, long, slender and bare. Palpi large, 2-segmented. Labium atrophied. Tip of abdomen permanently rotated through 180°. Front legs long; first tarsal segment longer than tibiae; no claws. Mid-legs remarkably short and rather stout; claws of peculiar structure. Hind legs long; claws rudimentary; no tibial combs or spurs; no empodium. Wings reduced in size and of peculiar form, the basal part puffed out, the tip flattened and jointed, venation not clearly defined. Female: vermiform, without appendages except for the rudimentary posterior legs. Larvae and pupae resembling those of *Tanytarsus*.

From the similarity⁽¹⁾ of the larvae and pupae of *P. natans* to those of the two normally developed and unmodified species of *Tanytarsus*, *halophilae* Edw. and *maritimus* Edw., which occur in the early stages along with those of *Pontomyia*, Edwards considers that *P. natans* is a species of *Tanytarsus* that has become largely modified in the adult stage to suit it to a submarine existence.

In a subsequent paper to that of Edwards, Buxton describes the extraordinary habits of the adults of the Samoan insect. The larvae and pupae are found in small mud tubes attached to the leaves and stems of the marine plant *Halophila ovalis*, which grows at or below low water mark. The food of the larvae appeared to consist largely of diatoms and, while some of the leaves showed evidence of having been eaten, it was not definitely ascertained that this was due to the larvae. The female insect is very much reduced, quite apterous and lacks appendages except for the rudiments of the posterior two pairs of legs; they do not appear normally to leave the pupal tube and copulation may take place while still within the tube. The male is generally at home in the water, swimming in search of the female. Locomotion is accomplished by means of its long first and third pairs of legs and apparently without the use of its wings. Strong tidal currents did not appear to interfere with it much, and Buxton caught most of his material by means of a tow-net dragged through the water over and amongst the plants at low or half tide and after sundown. They were not found during daylight hours.

Of our South Australian species there is, as yet, little in the way of observations on its habits to report, but I am indebted to Mr. Cotton for the following:—

“These small insects were taken on the west coast of Reevesby Island at sundown on December 7, 11 and 12, 1936, while sifting the surface sand for small crustaceans. They were to be seen skipping about on the surface in slight depressions in the drier sand close to the water's edge. At no time during the day when this work was being carried on were they observed, and at sundown it was only close examination of the sand surface to observe the habits of burrowing amphipods that revealed them. A few specimens were also seen floating on the water at the extreme edge of the tide.”

As far as the above observations go, our Australian species would appear to be not quite as truly submarine as *P. natans* and possibly may not be as closely associated with *Halophila*, although Mr. Cotton informs me that this plant was growing in the neighbourhood. Associated with the midge were specimens of the small Curculionid beetle *Notiomimetes pascoei* Wollaston belonging to the *Cossoninae* which are essentially inhabitants of the coasts of islands around the Australian and New Zealand coasts.

⁽¹⁾ The early stages of the Chironomidae often show more marked generic and specific differences than are to be found in the adults.